Troubleshooting Guide — Check the following possible causes.

No sound from speakers
- Improper polarity of the batteries
- Weak batteries → Replace all the batteries with new ones.
- Improper FUNCTION selector setting
- The headphones are plugged in.

The unit does not operate
- The disc is inserted with the labeled surface down.
- The disc compartment lid is not closed.
- Dusty or defective disc. → Clean the disc with an optional cleaning cloth. Wipe the disc from the center out.
- Moisture condensation. → See "Precautions".
- Improper FUNCTION selector setting.
- When the CD operation buttons cannot be activated, turn off the unit and turn it on again.

Skipping of sound in CD operation
- Dusty or defective disc. → Clean the disc.
- Dirty lens. → Clean the lens with a commercially available blower.
- Strong vibrations.

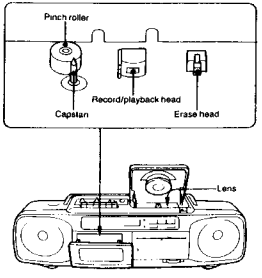
No tape operation
- ❚❚ PAUSE button is depressed. → Press again to release it.

● REC button cannot be depressed.
- The cassette inserted has the tabs removed. → Cover the slots.

Sound drop-outs, loss of high frequencies, or excessive noise
- Dirty heads → Clean the portions illustrated below with a cleaning tip slightly moistened with cleaning fluid or alcohol.

Recording or playback cannot be made or there is a decrease in sound level.
- Dirty heads → Clean the heads.
- Improper FUNCTION selector setting.

Unsatisfactory erasing
- Dirty erase head → Clean the head.



SONY

CD Radio Cassette-Corder

CFD-501

3-751-268-51 (1)

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

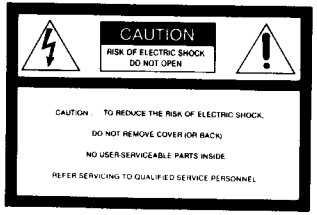
Owner's Record

The model number is located at the bottom and serial number is located in the battery compartment.
Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. CFD-501 Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

The use of optical instruments with this product will increase eye hazard.

INFORMATION

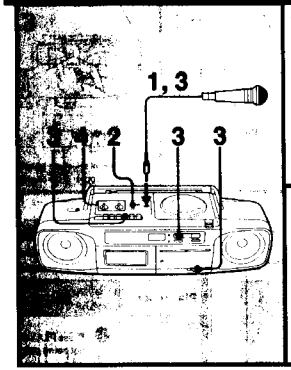
This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna
Relocate the equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

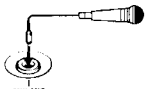
If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Sony Corporation © 1991 Printed in Malaysia

Microphone mixing — Use a monaural microphone equipped with a miniplug (optional).



1



Turn on the power if it has a switch.

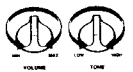
2 **Choose the desired sound source with the FUNCTION selector.**

Sound source	FUNCTION selector
CD sound	CD
Radio program	AM or FM
Tape sound	TAPE (CD/RADIO OFF)

3

Play the sound source and speak or sing into the microphone.

4



To record the mixed sound
Insert a cassette and only press ● . You can record the sound of the microphone mixed with a CD or radio program.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 3.2-ohm loads, both channels driven from 150-15,000 Hz: rated 2.3 W per channel minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

OTHER SPECIFICATIONS

CD player section
System: Compact disc digital audio system
Laser diode properties: Material: GaAlAs
Wavelength 780 nm
Emission duration: Continuous
Laser output: less than 44.6 μW
* This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block.
Frequency response: 20—20,000 Hz +1 dB
Wow and flutter: Below measurable limit

Radio section
Frequency range: FM: 87.6 — 108 MHz
AM: 530 — 1,710 kHz
Antennas: FM: Telescopic antenna
AM: Built-in ferrite bar antenna

Tape recorder section and general
Recording system: 4-track 2-channel stereo
Frequency response: 70 — 10,000 Hz
(with TYPE I (NORMAL) cassette)
Speaker: Full-range speakers: 10 cm dia., cone type
Inputs: Mixing microphone input jack (minijack)
Sensitivity 2.5 mV
For low impedance microphone
Outputs: Headphones jack (stereo minijack)
For 16 — 68 ohms impedance headphones

Power requirements: 120 V AC, 60 Hz DC 9 V, 6 size D (R20) batteries
Power consumption: AC 25 W
Battery life: (hours)

	FM recording	Playback
Sony SUM-1 (NS)	approx. 11	approx. 8
Sony Alkaline AM1 (N)	approx. 17	approx. 12

Dimensions: 590 × 172 × 200 mm (w/h/d) (23 1/4 × 6 7/8 × 7 7/8 inches) incl. projecting parts and controls
Weight: Approx. 4.6 kg, incl. batteries (Approx. 10 lb 2 oz)
Supplied accessories: AC power cord (1)

Design and specifications subject to change without notice.

OPTIONAL ACCESSORIES
Sony "MDR" headphone series
Sony "Dynamic microphone" series
Head demagnetizer: HE-5C
CD cleaner: XP-CD1, XP-CD4

Precautions

Notes on power sources
- For battery operation, use six size D (R20) batteries.
For AC operation (120 V AC only), use the supplied AC power cord; do not use any other type.
- When the internal batteries will not be used, remove them to avoid damage caused by battery leakage and corrosion.
- Unplug the unit from the wall outlet when it is not to be used for an extended period of time.

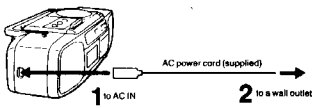
Notes on handling the unit
- As the laser beam used in the CD player section is harmful to the eyes, do not attempt to disassemble the casing. Refer servicing to qualified personnel only.
- If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the CD player section. Should this occur, the player will not operate properly. In this case, remove the disc and wait about an hour for the moisture to evaporate.
- Avoid exposure to temperature extremes, direct sunlight, dust, or mechanical shock.
- If the unit is left in a car parked in the sun, be sure to choose a location in the car where the unit will not be subject to the direct rays of the sun.
- Should any solid object or liquid fall into the unit, unplug the unit, remove the batteries, and have the unit checked by qualified personnel before operating it any further.
- Be careful not to lift the handle while the telescopic antenna is in a raised position.
- After long storage, set the unit in playback mode and warm it up for a few minutes before inserting a cassette.
- Do not place anything within 10 mm of the side of the cabinet. The ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.
- Since a strong magnet is used for the speakers, keep personal credit cards using magnetic coding or spring-wound watches away from the unit to prevent possible damage from the magnet.

Note on cassettes longer than 90 minutes
The use of those cassettes is not recommended except for long continuous recording or playback.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

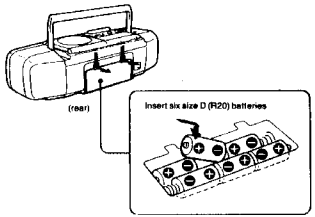
Power Sources
— The OPR/BATT indicator lights up during operation.

House Current



Batteries

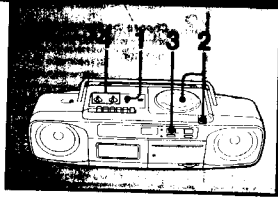
The unit cannot be operated on the internal batteries when the AC power cord is connected to the unit.



For critical recording or disc playing
Operating the unit on AC power is recommended.

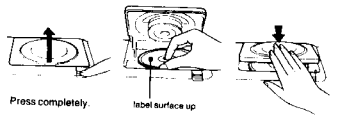
When to replace the batteries
If the batteries become weak while the unit is in operation, the OPR/BATT indicator will glow faintly. In this case, replace all the batteries with new ones.

Playing a Disc — An 8 cm (3 inch) CD can be played without an adaptor.



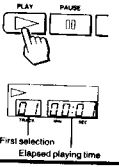
1

2 Place a disc.

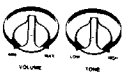


The number of selections in the disc and the total playing time will appear in the display window.

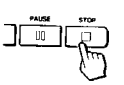
3



4



To stop play

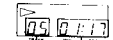


To pause: Press ▮▮.
To resume play, press ▮▮ again.
To stop: Press ■.
To eject a disc: Press PUSH OPEN.
To turn off the unit: Set FUNCTION to TAPE (CD/RADIO OFF).

Do not press PUSH OPEN during playing
Otherwise, the disc will be damaged. Be sure to stop the disc first.

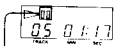
Information Display

During playing



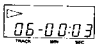
Selection Number being played — Elapsed playing time

While CD player is set in pause

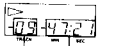


Pause indicator appears.

Between selections
Remaining time for the next selection is displayed.



To display remaining time of the disc being played
Press REMAIN/ENTER.



Remaining number of selections — Total remaining time of disc

For normal display, press REMAIN/ENTER again.

Note
- Even if REMAIN/ENTER button is pressed, remaining time of the disc being played cannot be displayed when it has more than 100 selections or its remaining time is more than 100 minutes.
- During shuffle or program play, remaining time of the disc is not displayed even if REMAIN/ENTER is pressed.

Selecting Various Playing Modes

Each time PLAY MODE is pressed, play mode changes as follows. To stop the disc, press ■.
Operate while listening to the disc. However, select INTRO scan play when disc is not being played.

Play mode	Button to be pressed	Front display window
	❶ Press PLAY MODE once when disc is not being played. PLAY MODE	
INTRO	❷ Press ▶. Scanning starts from the first selection. PLAY	* Beginnings of selections are played for 10 seconds successively.
	Press PLAY MODE once more while listening to the desired selection. PLAY MODE	
REPEAT 1	Press ⏮ / ⏭ for another selection.	
	Press PLAY MODE once more. When play reaches the end of the disc, it restarts from the first selection. PLAY MODE	
SHUFFLE	Press PLAY MODE once more. PLAY MODE	

During REPEAT SHUFFLE play
To locate the beginning of the current selection
Press ⏮.
To locate the next selection
Press ⏭.
You cannot locate a previous selection even if you keep pressing ⏮.

Selecting a particular Portion

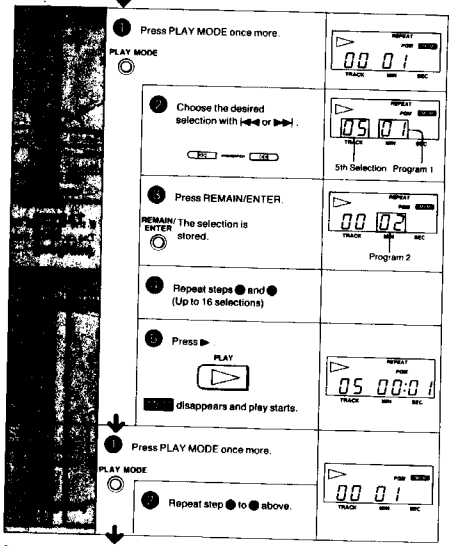
	To locate the beginning of the current selection	To locate the next selection
a particular (AMS*)	Press once.	Press once.
particular selection	To go back at high speed: Keep pressed.	To go ahead at high speed: Keep pressed.

* AMS is the abbreviation of Automatic Music Sensor.

Notes on the AMS function
- The player pauses at the beginning of the located selection when you press ⏮ or ⏭ in the pause mode.
- If you press ⏮ repeatedly, the player locates the previous selections.
  If you press ⏭ repeatedly, the player locates the next selections and stops at the last selection.

Notes on compact discs

This way	Not this way	Not this way
Handle the disc by its edge	Do not touch the surface	Do not stick paper or tape nor write anything on the surface



❶ Press PLAY MODE once more.
PLAY MODE

❷ Choose the desired selection with ⏮ or ⏭.
5th Selection Program 1

❸ Press REMAIN/ENTER.
REMAIN/ ENTER The selection is stored.
Program 2

❹ Repeat steps ❷ and ❸ (Up to 16 selections)

❺ Press ▶.
PLAY
disappears and play starts.

❶ Press PLAY MODE once more.
PLAY MODE

❷ Repeat step ❸ to ❸ above.

To return to normal play press PLAY MODE once more.

When you open the disc holder or you press ■
All programmed selections are cleared.

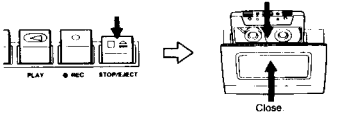
If another selection is stored after 16 selections have been stored
The first selection will be cleared and the new one will be stored in its place. The program will be cleared when you press ■.

Playing Back a Tape

1

2 **Insert a cassette.**

Use only TYPE I (normal) tapes.



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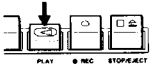
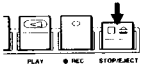


4

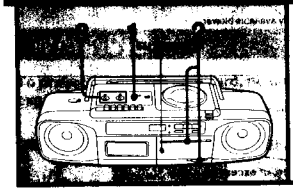
To stop playback



To pause: Press ❚❚.
To release pause, press ❚❚ again.
To wind the tape: Press ◀◀.
To rewind the tape: Press ▶▶.

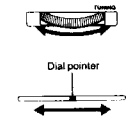
To locate a desired position
Keep pressing ◀◀ or ▶▶ during play.
At the desired point found by listening to the high-speed sound, release the pressed button to restart playing back.

Listening to the Radio



1 **Select the desired band.**

2 **Tune in.**



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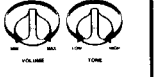
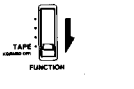
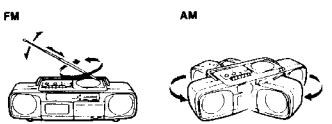


To turn off the radio



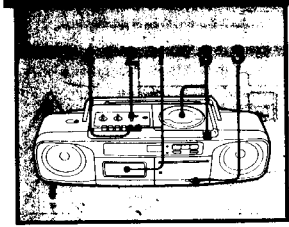
For improved reception



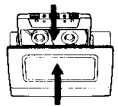
When an FM stereo program is tuned in
FM STEREO indicator lights up.

If the received FM stereo is too weak
The reception becomes monaural, and the FM STEREO indicator will go off.

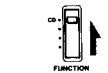
Recording — Use only a TYPE I (normal) cassette for recording.



1 **Insert a cassette.**



2 **From a disc**



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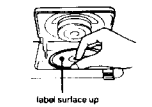
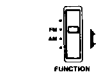


2 **From the radio**



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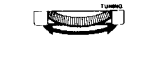

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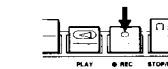

◀ is depressed automatically.

When you record from a disc, press ● REC after the number of the selections in the disc and the total playing time are displayed.
Disc playing will automatically start from the first selection after approx. 8 seconds.

To stop recording
Press ■ of the CD player and ■ ⏏ of the cassette deck.

Set FUNCTION to TAPE (CD/RADIO OFF).

On recording level
Recording level is automatically set. Volume and tone adjustments will not affect recording level.

To record in PGM (program) mode
1 Set FUNCTION to CD.
2 Select PGM play. (See "Selecting Various Playing Modes".)
3 Press the ● REC button.
Disc playing and recording will automatically start after approx. 8 seconds.

To prevent accidental erasure
Break off the tab corresponding to the side which has been recorded on.
Recording on that side will be protected.